



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/597,935	06/20/2000	Tatsuya Wakuta	FUJR 17.355	4961

26304 7590 11/17/2003

KATTEN MUCHIN ZAVIS ROSENMAN  
575 MADISON AVENUE  
NEW YORK, NY 10022-2585

EXAMINER
----------

TRAN, PABLO N

ART UNIT	PAPER NUMBER
----------	--------------

2685

DATE MAILED: 11/17/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/597,935

Applicant(s)

WAKUTA ET AL.

Examiner

Pablo N Tran

Art Unit

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 27 and 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26, 28-34, 36 and 37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Shi* (6,507,740) in view of *Frank et al.* (RE37,757).

As per claims 1, 4, 7, 10, 13, 16, 19, 22, and 30, *Shi* disclosed a method for handling off a mobile station (MS) from one base station (BS) to another, comprising: at least one MS, at least two BS, a MSC, and wherein a handoff threshold varying unit which varies a handoff threshold which is set in one of said at least one MS (col. 4/ln. 56-57), according to quality of a wireless link between the MS and BS and a handoff processing unit which executes processing for handling off said MS from one BS to another based on said handoff threshold (fig. 6, abstract, col. 5/ln. 30-col. 7/ln. 11).

*Shi* does not explicitly disclose a method of stopping the hand-off process of said MS to another wireless BS when a frequency (number) of handoffs has exceeds a predetermined frequency. However, such method is well known in the art, as taught by *Frank et al.* (col. 8/ln. 4-15). Therefore, it would have been

Art Unit: 2685

obvious to one of ordinary skill in the art to provide such method of stopping the hand-off process of said MS to another wireless BS when a frequency (number) of handoffs has exceeds a predetermined frequency, as taught by *Frank et al.*, to the communication system of *Shi* in order to eliminate unnecessary drop calls and system resources tie-up.

As per claims 25 and 33, *Shi* disclosed a quality-versus-threshold table, which indicates a relationship between said handoff threshold and said quality (see *Shi*, fig. 5, col. Col. 5/ln. 4-30).

As per claims 26, 28-29, 34, and 36-37, *Shi* disclosed said handoff varying unit lowers or raise said handoff threshold and stop or executed said processing for handling off (see *Shi*, col. 5/ln. 30-col. 7/ln. 11).

3. Claims 1-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Shi* (6,507,740) in view of *Frank et al.* (RE37,757) and further in view of *Balachandran* (5,594,943).

As per claims 2, 5, 8, 11, 14, 17, 20, 23, and 31, the modified system of *Shi* does not explicitly disclose the handoff threshold is varied on a real-time basis. However, such handoff threshold varied on a real-time basis is notoriously well known in the art, as taught by *Balachandran* (fig. 7-22). Therefore, it would have been obvious to one of ordinary skill in the art to provide such handoff threshold varied on a real-time basis, as taught by *Balachandran*, the adaptive handoff threshold in a mobile telecommunication system of *Shi* in order to provide seamless process of handling off mobile station communication link from one base station to another.

Art Unit: 2685

As per claims 3, 6, 9, 12, 15, 18, 21, 24, and 32, the modified system of *Shi* in view of *Balachandran* further disclosed obtaining said wireless quality link before performing the operation of varying said handoff threshold (see *Shi*, fig. 4, col. 4/ln. 39-col. 5/ln. 30).

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hogg et al. (6,430,412), Huang et al. (6,611,506), Cuffaro et al. (WO9957933) disclose method and apparatus of handoffs in a radiotelephone communication system.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pablo Tran whose telephone number is (703)308-7941. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (703)305-4385.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121  
Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

**PABLO N. TRAN**  
**PRIMARY EXAMINER**

November 12, 2003

  
